



OIPE

RED

## RAW SEQUENCE LISTING

DATE: 04/10/2002

PATENT APPLICATION: US/09/986,666

TIME: 12:24:48

Input Set : A:\Sequence Listing for Divisional 3.txt

Output Set: N:\CRF3\04102002\I986666.raw

```

3 <110> APPLICANT: HO, CHIEN
4     TSAI, CHING-HSUAN
5     FANG, TSUEI-YUN
6     SHEN, TONG-JIAN
8 <120> TITLE OF INVENTION: LOW OXYGEN AFFINITY MUTANT HEMOGLOBIN
10 <130> FILE REFERENCE: 002547/20118DIV3
12 <140> CURRENT APPLICATION NUMBER: 09/986,666
13 <141> CURRENT FILING DATE: 2001-11-09
15 <150> PRIOR APPLICATION NUMBER: 09/598,218
16 <151> PRIOR FILING DATE: 2000-06-21
18 <160> NUMBER OF SEQ ID NOS: 7
20 <170> SOFTWARE: PatentIn version 3.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 28
24 <212> TYPE: DNA
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
betan108
29     Q mutation into plasmid pHE2
31 <400> SEQUENCE: 1
32 cgtctgctgg gtcaggtact agtttgcg                28
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 30
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
alpha94
42     A mutation into plasmid pHE2
44 <400> SEQUENCE: 2
45 ctgcgtgttg ctccgggtcaa cticaaactg            30
48 <210> SEQ ID NO: 3
49 <211> LENGTH: 29
50 <212> TYPE: DNA
51 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
alpha94
61 <210> SEQ ID NO: 4
62 <211> LENGTH: 27

```



63 <212> TYPE: DNA

64 <213> ORGANISM: Artificial Sequence



## RAW SEQUENCE LISTING

DATE: 04/10/2002

PATENT APPLICATION: US/09/986,666

TIME: 12:24:48

Input Set : A:\Sequence Listing for Divisional 3.txt

Output Set : N:\CRF3\04102002\I986666.raw

66 &lt;220&gt; FEATURE:

67 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce  
betaN108

68 Q mutation into plasmid pHE7

70 &lt;400&gt; SEQUENCE: 4

71 acagaccagt acttgcccc ggagcct 27

74 &lt;210&gt; SEQ ID NO: 5

75 &lt;211&gt; LENGTH: 1140

76 &lt;212&gt; TYPE: DNA

77 &lt;213&gt; ORGANISM: Homo sapiens

79 &lt;400&gt; SEQUENCE: 5

80 aaatgagctg ttgacaatta atcatcggt cgtataatgt gtggaattgt gagcggataa 60

82 caatttcaca caggaaacag aattcgagct cggtagccgg gtacatgga gattaactca 120

81 atctagaggg tatlaaiaat gtatcgctta aataaggagg aataacatat ggtgctgtct 180

86 cctgcgcaca agaccaacgt caaggccgcc tggggttaagg tggcgcgcga cgtggcgcag 240

88 tatggtgcgg aggccttga gaggatgttc ctgtccttcc ccaccacca gacctacttc 300

90 cgcgaacttcg atctgagcca cggctctgcc cagggttaagg gccacggcaa gaagggtggc 360

92 gacgcgctga ccaacgcctg gggcacgtg gacgacatgc ccaacgcctg gtccgccttg 420

94 agcgaactgc acgcgcacaa gcttcgggtg gaccgggtca acttcaagct cctaagccac 480

96 tgcctgttgg tgaccttggc cgcacacctc ccgcgcaggt tcaccttgc ggtgcacgcc 540

98 tccctggaca agttcctggc ttctgtgagc accgtgctga cctccaaata ccgttaaact 600

100 agaggggtatt aataatgtat cgttaaata aggaggaata acatatggtg cacctgactc 660

102 ctgagggaaa gtctgcctgt actgcctgt ggggcaagg gaacgtggat gaagtgtgtg 720

104 gtgagggcct gggaaggctg ctggtgtgtt acccttggac ccagaggttc tttgagtcct 780

106 ttggggatct gtccactcct gatgtgttta tgggcaaccc taagggtgaag gctcatggca 840

108 aqaaagtgtc cgggtgccttt agtgatggc tggctcacct ggacaacctc aagggcacct 900

110 ttgccacact gagtgaactg cactgtgaca agctgcacgt ggatcctgag aacttcaggc 960

112 tcttgggaca agtactgttc tgtgtgtgtg cccatcactt tggcaaaagaa ttcacccac 1020

114 cagtgcaggc tgcctatcag aaagtgggtg ctggtgtgtg taatgccttg gccacaagt 1080

116 atcactaagc atgcattgtt tttggcggat gagagaagat tttcagcctg atacagatta 1140

119 &lt;210&gt; SEQ ID NO: 6

120 &lt;211&gt; LENGTH: 36

121 &lt;212&gt; TYPE: DNA

122 &lt;213&gt; ORGANISM: Artificial Sequence

124 &lt;220&gt; FEATURE:

125 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce  
betaL105

126 W mutation into plasmid pHE7

128 &lt;400&gt; SEQUENCE: 6

129 cctgagaact tcaagtggtt aggcacgtg ctggtc 36

132 &lt;210&gt; SEQ ID NO: 7

133 &lt;211&gt; LENGTH: 1140

134 &lt;212&gt; TYPE: DNA

135 &lt;213&gt; ORGANISM: Homo sapiens

137 &lt;400&gt; SEQUENCE: 7

138 aaatgagctg ttgacaatta atcatcggt cgtataatgt gtggaattgt gagcggataa 60

140 caatttcaca caggaaacag aattcgagct cggtagccgg gtacatgga gattaactca



## RAW SEQUENCE LISTING

DATE: 04/10/2002

PATENT APPLICATION: US/09/986,666

TIME: 12:24:48

Input Set : A:\Sequence Listing for Divisional 3.txt

Output Set: N:\CRF3\04102002\I986666.raw

150	qacgcgctga	ccaacgcgct	ggcgcacgtg	gacgacatgc	ccaacgcgct	gtccgcctctg	420
152	agcgacctgc	acgcgcacaa	gcttcgggtg	gaccgcgtca	acttcaagct	cctaagccac	480
154	tgctgctgg	tqacctggc	cgcgccctc	ccgcgcgagt	tcacctctgc	ggtgcacgcc	540
156	tcctggaca	agtccctggc	ttctgtgagc	accgtgctga	ctccaaata	cgttaaact	600
158	agagggatt	aataatgtat	cgttaaata	aggaggaata	acatatggtg	cacctgactc	660
160	ctgaggagaa	gtctgcggtt	actgcctgt	ggggcaaggt	gaacgtggat	gaagttggtg	720
162	gtgaggccct	gggcaggctg	ctggtggtct	acccttgga	ccagaggttc	tttgagtct	780
164	ttggggatct	gtccactcct	gatgctgtta	tgggcaacct	taaggtgaag	gctcatggca	840
166	agaaagtgt	cgggtgcctt	agtgatggc	tggctcacct	ggacaacctc	aagggcacct	900
168	ttgccacact	gagtgaactg	cactgtgaca	agctgcacgt	ggatcctgag	aacttcaggt	960
170	ggctaggcaa	cgtgctggtc	tgtgtgctgg	cccatcactt	tggcaaagaa	ttccccccac	1020
172	cagtgcaggc	tgcctatcag	aaagtgggtg	ctggtgtggc	taatgcctg	gcccacaagt	1080
174	atcactaagc	atgcactctg	tttggcggat	qaqaaagat	tttcagcctg	atacagatta	1140



**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/986,666

DATE: 04/10/2002

TIME: 12:24:49

Input Set : A:\Sequence Listing for Divisional 3.txt

Output Set: N:\CRF3\04102002\I986666.raw